

# **PSYCHIATRY**

*Quarterly Review of*

# **AND NEUROLOGY**

**VOLUME 7 NO. 4**

**OCTOBER 1952**

*Incorporating the International Record of Psychiatry and Neurology*

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# **PSYCHIATRY**

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**VOLUME 7 NO. 4**

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*Incorporating the International Record of Psychiatry and Neurology*

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## FOREWORD

The purpose of the QUARTERLY REVIEW OF PSYCHIATRY AND NEUROLOGY is to present promptly brief abstracts, noncritical in character, of the more significant articles in the periodical medical literature of Europe and the Americas.

For reader reference, the abstracts are classified under the following general headings:

### PSYCHIATRY

1. Administrative Psychiatry and Legal Aspects of Psychiatry
2. Alcoholism and Drug Addiction
3. Biochemical, Endocrinologic and Metabolic Aspects
4. Clinical Psychiatry
5. Geriatrics
6. Heredity, Eugenics and Constitution
7. Industrial Psychiatry
8. Psychiatry of Childhood
9. Psychiatry and General Medicine
10. Psychiatric Nursing, Social Work and Mental Hygiene
11. Psychoanalysis
12. Psychologic Methods
13. Psychopathology
14. Treatment
  - a. General Psychiatric Therapy
  - b. Drug Therapies
  - c. Psychotherapy
  - d. The "Shock" Therapies

### NEUROLOGY

1. Clinical Neurology
2. Anatomy and Physiology of the Nervous System
3. Cerebrospinal Fluid
4. Convulsive Disorders
5. Degenerative Diseases of the Nervous System
6. Diseases and Injuries of the Spinal Cord and Peripheral Nerves
7. Electroencephalography
8. Head Injuries
9. Infectious and Toxic Diseases of the Nervous System
10. Intracranial Tumors
11. Neuropathology
12. Neuroradiology
13. Syphilis of the Nervous System
14. Treatment
15. Book Reviews
16. Notes and Announcements

In fields which are developing as rapidly as are psychiatry and neurology, it is obviously impossible to abstract *all* the articles published—nor would that be desirable, since some of them are of very limited interest or ephemeral in character. The Editorial Board endeavors to select those which appear to make substantial contribution to psychiatric and neurologic knowledge and which promise to be of some general interest to the readers of the REVIEW. Some articles, highly specialized in character or concerning a subject already dealt with in an abstract, may be referred to by title only at the end of the respective sections.

A section entitled INTERNATIONAL RECORD OF PSYCHIATRY AND NEUROLOGY is included at the beginning of the journal. The Record Section consists of advanced clinical and experimental reports.

The Editorial Board will at all times welcome the suggestions and criticisms of the readers of the REVIEW.

WINFRED OVERHOLSER, M.D.

*Editor-in-Chief*



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*Quarterly Review of*

# PSYCHIATRY AND NEUROLOGY

VOLUME 7 NO. 4

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*Incorporating the International Record of Psychiatry and Neurology*

## Research in Cortisone Therapy

Ai Ding Fang, M.D., Margaret E. Martin, B.S., Solomon Katzenelbogen, M.D.

SAINT ELIZABETHS HOSPITAL  
WASHINGTON, D. C.

We have studied the therapeutic effects, the physiologic and psychologic reactions to cortisone (Merck\*) in twenty-seven schizophrenic patients. A more comprehensive study in a larger number of patients we expect to have completed in the near future.

We elected to limit our study to patients suffering from schizophrenia, not because we expected to obtain the best results in this disease, but mainly on account of the limitation of the amount of cortisone.

In a paper presented at the American Psychiatric Association meetings in May 1951, Rome and Braceland<sup>1</sup> reviewed comprehensively the psychologic reactions to cortisone of patients treated for various physical diseases. In brief, these reactions, as described by various authors, are as follows:

"An increased mental capacity and activity." "A marked sense of well-being."<sup>2</sup> "Typical euphoria."<sup>3</sup> "General improvement in mood," and less frequently, "Severe depression and apathy."<sup>4</sup> Hypomanic reactions, schizoid reactions with—catatonic features, and paranoid reactions were described as having a relationship to the dosage; namely, when the dosage was reduced, these untoward reactions disappeared.<sup>5,6</sup>

A mentally retarded boy, two and one half years old, became "wildly excited and manic" after receiving 50 mg. of cortisone for eight days, as reported by Wilkins and his associates.<sup>7</sup>

Then, other writers described their patient's reactions to cortisone as "Severe mental depression";<sup>8</sup> "Severe agitated depression";<sup>9</sup> "Improvement in morale and a sense of well-being";<sup>10</sup>

\* The authors are grateful to Merck & Co. for generously making the drug available.

Rome and Braceland<sup>1</sup> grade their reactions as follows:

*Grade 1.* As described by the patients the reactions are: "I never felt better in my life." "I am on top of the world." "I never realized what it was like to feel really well." "For the first time in years I feel alive." "I feel wonderful."

The authors remark that these mood changes were associated with and appeared to be directly correlated to the improvement or complete disappearance of the symptoms of the disease. But there were also instances in which the favorable mood changes took place before there was any evidence of a remission of the physical signs and symptoms in patients suffering from rheumatoid arthritis. As a rule, there was, however, consistency in the paralleled improvement of both the mood and the symptoms of the disease.

*Grade 2.* The just described Grade 1 reactions are more marked. In addition, there is an increase in mental and physical activity. The patient usually suffers from insomnia, which unfortunately does not yield to ordinary sedatives. According to the nurses, friends, and members of the families of the patients, the condition is quite similar to that of alcoholic intoxication.

*Grade 3.* Anxiety, phobias, obsessive ruminations, fluctuations from hypomania to depression, and thinking disorders are commonly observed. The authors' impression is that the drug "fulminated, in some fashion not clearly understood, a schizoid, obsessional, or cyclothymic personality organization, as the case may be, into activity."

*Grade 4.* Marked psychotic reactions were observed in 10 per cent of their patients. The type of the psychotic reactions appeared to be determined largely by the pre-psychotic personality. All the usual psychotic reaction types were represented. In a large majority of the patients there was a history of a previous psychiatric illness. The psychotic reactions subsided spontaneously within a few weeks after the discontinuation of the treatment.

The personality reactions described by Rome and Braceland were not commonly associated with demonstrable metabolic changes. However, in certain patients a low serum potassium caused by cortisone was paralleled by psychologic reactions of the just described Grades 3 and 4. Considering that the administration of potassium was followed by prompt relief from those reactions, the authors feel that cortisone is involved in those reactions, indirectly; other investigators have reported similar findings.

Cessation of treatment is, according to Rome and Braceland, and others, fraught with the following complications: "Feeling of exhaustion, asthenia, unremitting fatigue of various durations." These observations acquire a significant meaning in the light of experiments in animals showing that prolonged high dosage of cortisone often causes a reduction in the size of the adrenal cortex. The drug apparently produces a transitory insufficiency of the adrenal cortex.<sup>11</sup>

The other complication is presented by the return of the symptoms of the underlying disease. The patient again suffers pain and feels disabled, as he was before the treatment.

Other clinical symptoms and metabolic changes induced by cortisone, as brought out in the comprehensive review by Rome and Braceland, may be briefly summarized as follows: Hirsutism, acne, striae of the skin, rounding of the face and sometimes amenorrhea. The blood pressure shows interesting changes: low blood pressure appears to rise towards normal, while high blood pressure, especially in hypertensive cardiovascular

disease, shows a tendency to decrease. These complications disappear after the cessation of the administration of the drug.

The metabolic changes observed by various authors<sup>1</sup> are: a clinically significant hypoglycemia, accompanied by the diminution in the urinary excretion of cortisone and 17-ketosteroids; retention of sodium and water, occurring usually at the beginning of the treatment. If the treatment is continued, a spontaneous enuresis usually follows and it does not stop immediately after the cessation of the therapy. However, in certain cases, the retention of sodium and water was so great that ascites or peripheral or pulmonary edema had developed. The treatment had to be discontinued. High dosage of cortisone may also cause increased urinary excretion of potassium. As also mentioned by Rome and Braceland, among others, the loss of potassium produces symptoms which require replacement potassium therapy.

These clinical and metabolic changes just described emphasize the fact that patients under cortisone therapy should be closely observed; they also suggest that comprehensive clinical and laboratory studies are bound to contribute to better knowledge of the pharmacodynamics of the drug.

Our own studies of cortisone therapy in schizophrenic patients started in March 1951. Considering that the drug was found to have marked physiologic effects on the metabolism and organs we supplemented the clinical, medical, and psychiatric studies with comprehensive laboratory studies, for two purposes: to determine more adequately the patient's physical condition—his or her fitness for the treatment; to use the pretreatment laboratory findings as controls in determining whatever changes may occur during the treatment.

Following are the laboratory studies: *Blood count*, including sedimentation rate and differential count of white cells. *Blood chemistry*: Sugar, cholesterol, N P N, creatinine, chloride, CO<sub>2</sub> combining power, sodium, potassium. *Urine analysis*: In addition to the routine examinations, 17-ketosteroids, uric acid-creatinine ratio were determined in certain cases, as far as the laboratory facilities permitted to do so. *Electrocardiogram and electroencephalogram*: The studies were carried out in each patient before the beginning of the treatment and once a week or more or less frequently throughout the treatment, as far as the laboratory facilities permitted to do so.

**Dosage:** Considering the previously mentioned rather intense physiologic and sometimes untoward effects of the drug, we were quite conservative in the dosage we used: a) first day, 50 mg. were administered twice at an interval of 8 hours; b) if no severe after effects were observed, the same dosage, twice a day, was used for 13 consecutive days; c) then, the drug was given at the same dosage, twice a day, but only every other day, for 8 days; d) finally, the dosage was reduced to 25 mg. twice a day, every other day, for 8 days. Our patients were closely observed throughout the day. The above described untoward effects, particularly edema, and personality reactions were looked for.

#### THERAPEUTIC EFFECTS

The treatment, so far, was carried out in 27 schizophrenic patients. Our observations of the results obtained may be briefly summarized as follows.

The therapeutic effects were described and graded by all those who had contact with

the patients treated, including the doctors, ward nurses, day and night supervisors. It is the majority of opinions described independently by each observer which determined the final grade adopted for each patient. The grades were marked as follows: *Unimproved*, *Slightly Improved*, *Improved*, *Much Improved*.

The therapeutic results obtained are as follows:

Unimproved	9 patients
Slightly Improved	8 "
Improved	7 "
Much Improved	3 "
Total	27 "

It should be noted that these results are based on observations of each patient from two to three months following the completion of the treatment. The age of the patients and the duration of their illness did not appear to be significant factors.

#### UNTOWARD EFFECTS OF THE DRUG

Six out of our 27 patients treated showed the following more or less marked physiologic reactions: acne of the face, generalized rash, puffiness of the eyelids and watery eyes. These reactions were not severe enough to cause significant discomfort to the patients and have cleared up rapidly following the cessation of the treatment. In no case were these reactions severe enough to justify either the cessation of the treatment or its interruption for any considerable length of time.

#### SPECIAL LABORATORY STUDIES

1. The electrocardiograms were not significantly affected. 2. The electroencephalographic records showed some improvement. 3. Blood plasma sodium increased above the pre-cortisone level in 3 cases, decreased in 17 cases, and varied in 5 cases. 4. Blood plasma potassium increased in 12 cases, decreased in 4 cases, and varied in 8 cases. 5. CO<sub>2</sub> combining power was not significantly affected. 6. Blood chlorides decreased in most cases. 7. Blood sugar increased slightly in most cases. 8. Blood uric acid, creatinine and NPN showed no significant changes; creatinine remained normal. 9. Blood cholesterol showed no significant changes. 10. 17-ketosteroids showed no changes. 11. Hematology: hemoglobin, R.B.C., W.B.C., sedimentation rate, neutrophils increased in most cases. There was no significant effect on eosinophils, lymphocytes, monocytes, and basophils.

#### IMPRESSION

1. On the basis of the therapeutic results obtained in our 27 patients, we feel that cortisone should have a place in further studies of biochemotherapy in schizophrenia and in other mental diseases.

2. With conservative and proper dosage for the individual patient, untoward effects do not occur frequently; when they do occur, they are not of a serious nature.

3. The special laboratory studies were carried out in too small a number of cases to allow us an opinion as to their significance in their relation to the therapeutic results obtained.

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#### SAMUEL W. HAMILTON MEMORIAL LECTURE AND AWARD

The American Psychopathological Association has established the SAMUEL W. HAMILTON MEMORIAL LECTURE AND AWARD in commemoration of the unique contribution made by Dr. Hamilton to the fields of psychiatry, medicine, and sociology. He was one of the founder of the Association, served a term as President, and acted as its Secretary for many years. The recipient of the Award will be chosen each year by the Council of the American Psychopathological Association and presented with the Samuel W. Hamilton bronze medal after the Hamilton Lecture.

Dr. William B. Terhune, Chairman of the Committee to raise the necessary funds, announced that the contributions received from members of the Association and also from members of the American Psychiatric Association who participated as sponsors will perpetuate this yearly Award.

This year the first Award was presented to Clarence P. Oberndorf, M.D., Clinical Professor of Psychiatry at Columbia, for his distinguished contribution to psychopathology, at the Annual Meeting of the American Psychopathological Association held on Saturday, June 7th, at the Park Sheraton Hotel, New York. Dr. Oberndorf's lecture was entitled, "Function in Psychiatry."

# ABSTRACTS

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## psychiatry

### ADMINISTRATIVE PSYCHIATRY AND LEGAL ASPECTS OF PSYCHIATRY

148. *The Outstanding Personality Factors Among the Population of a State Penitentiary: A Preliminary Report.* SOL LEVY, R. H. SOUTHCOME, JOHN R. CRANOR AND R. A. FREEMAN, Medical Lake, Wis. J. Clin. Exper. Psychopath. 13:117-30, June 1952.

The present study, based on the Minnesota Multiphasic Personality Inventory (MMPI), is an attempt to establish outstanding personality factors among the population of a penal institution, to compare these with a control group of so-called socially well adjusted individuals, and if possible to work out a standard chart which could be used for prison classification as well as a prognostic guide for the subsequent extra-institutional social adjustment of the individual.

Three hundred consecutive male admissions to the Washington State Penitentiary at Walla Walla, Washington, regardless of age, race and crime, were tested and, for the control group 122 students of Washington State College at Pullman, Washington were used.

On the basis of this study several definite conclusions can be drawn which appear to have extremely practical implications for arranging a proper prison classification as well as for planning and making proper parole prognoses. This study first shows that we are dealing with a group consisting primarily of psychopaths and not with neurotics and psychotics. Repeaters have a higher psychopathic deviate than first offenders, and the conclusion seemed inevitable that the higher the psychopathic scale in a first offender the more likelihood for him to become a repeater.

The psychopathic deviate scale has its climax within the age group of 26 to 30 years and then gradually declines, indicating for all practical purposes that more crimes are committed by persons in this age group than any other, a fact that is further confirmed by the average age of prisoners at this institution which falls within this age group.

The personality factors in persons who commit crimes of violence and in those who commit crimes involving sex are almost identical and entirely different from the personality factors of persons committing nonviolent crimes. This finding, translated, would indicate that persons convicted of sex crimes appear to be potentially persons likely to commit crimes of violence.

During the middle age period convicts are inclined to develop neurotic and depressive features, a fact which to us appears to be important enough to be brought to the attention of the prison personnel, especially the medical personnel.

Within the group of mental defectives the psychopathic scale is low, indicating that their anti-social behavior is based primarily on the intellectual retardation rather than psychopathic personality traits. This type of person is then, because of his low intellect, extremely and easily influenced by others, made a tool of others, taken advantage of and in general should be considered a follower rather than a leader in anti-social activities.

Finally, the escapee has an entirely different personality profile than the non-escapee. The escapee seemed inclined to project more than others, and this could be used practically for probable escape predictions. However, the escapee also shows a peak on another scale (the hypomanic), and this might be indicative of inner restlessness, hyperactivity and inability to settle down in any environment, which in turn might then be the causative factor for his trying to escape.—*Author's abstract*.

149. *Treatment of the Homosexual in Prison*. WILLIAM H. HAINES AND JOHN J. MC- LAUGHLIN, Chicago, Ill. Dis. Nerv. System 13:85-87, March 1952.

This paper is introduced by a general discussion on frequency of overt homosexuality among isolated groups. The authors feel that its frequent occurrence in prison results from the following reasons:

(1) relatively long periods of isolation; (2) a decrease in the number of social outlets in general activities, and (3) the unrestrained personality type that populates our prisons, as well as the large percentage of homosexuals in prisons.

The State of Illinois has two laws in particular applicable to the management of the sex deviate. They are the Courtney Act which provides for the commitment of criminal sexual psychopaths, and the Connors Act which provides for the examination and further treatment, when indicated, of persons completing sentences for sexual deviations.

The authors' suggestions for care of the homosexual in prison consist of the following recommendations:

1. That a diagnostic depot be set up in which psychiatric, psychologic and physical examinations be made, and a social history be taken, on all incoming inmates. Thus a classification could be set up and the isolation of the frankly psychotic, the mentally defective and the sexually aggressive be accomplished. These would, of course, require maximum supervision.
2. That a special section be set up for close supervision of overt homosexuals, and to prevent their preying on younger inmates and easily influenced persons.
3. Selection of guards and attendants who possess the maximum of stability available.
4. Selected cases for individual psychotherapy or group therapy.
5. Occupational therapy with close supervision is felt to be of value; also recreational activities, but again with close supervision to prevent small gatherings. It is

also felt that pornographic literature and entertainment may act as a stimulus to sexual expression. 5 references.—Author's abstract.

#### *For Reference Only*

150. *Principles and Techniques in the Integration of Psychiatric Services in a Juvenile Court With a Community Youth Program.* HARRIS B. PECK, New York, N. Y. Am. J. Orthopsychiat. 22:277-85, April 1952.

### **ALCOHOLISM AND DRUG ADDICTION**

151. *Coordinated Approach to Antabuse Therapy.* NORMAN M. MANN, EDWARD J. CONWAY, BENJAMIN H. GOTTESFELD AND LEONARD M. LASSER, Hartford, Conn. J. A. M. A. 149:40-46, May 3, 1952.

Disulfiram thiuramdisulfide is an additional adjunct in the approach to the alcoholic. Its use involves careful study and its value lies in the fact that it may instigate an aversion to alcohol, since exposure of a previously sensitized person will instigate a severely disagreeable physical reaction. Thus, it can enable the patient to more effectively utilize psychotherapeutic procedures.

Great care, however, should be exerted in the screening of the candidate for the drug. Study should include a careful physical and neuropsychiatric survey together with evaluation of environmental factors. From the purely physical point of view, great stress should be placed on the presence of a sound cardiovascular system, inasmuch as the outstanding fact in the thiuramdisulfide-alcohol phenomenon is a profound vasomotor reaction. Psychiatric experience has indicated that there must be some positive reassurance that the patient is willing and able to give up his drinking as a means of gratification. Those who have demonstrated great insecurity, active resistance to help, prominent projective trends, and extreme difficulties in adjusting to people and situations are not usually good candidates for this therapy.

Administration of the drug is initially carried out in a hospital environment according to a definite schedule. Prior to discharge a reaction is caused with a test dose of an alcoholic beverage of the patient's choosing. The resulting physical disturbance is marked, affecting the cardiovascular, respiratory and gastrointestinal systems. At the suitable time, the patient is discharged from the hospital on a maintenance dose of the drug and followed in the outpatient department. Reinforcement reactions are held periodically, as indicated. Minor side reactions to the drug are common initially, consisting of lassitude, occasional nausea and abdominal cramps, but are usually transient.

Important in the subsequent study of this group over an extended period has been the incidence of disorganization. This has been seen in 8 patients, 3 in whom psychotic reactions were relatively mild and easily controlled. However, in the remaining 5, the psychotic episodes were sufficiently severe to cause cessation of the drug. The etiology for this breakdown is felt to center about the severe threat presented by the

maintenance of sobriety and, similarly, the combined and apparently inseparable threat of thiuramdisulfide and psychotherapy.

It is significant that, of 32 patients studied over a period of eight months, 16 (50 per cent) have continued thiuramdisulfide therapy and have remained in contact with the clinic. Of these, 10 (31 per cent) have maintained complete sobriety; 6 (19 per cent) have had intermittent relapses but have returned to the regimen. 11 references. 2 tables.—*Author's abstract.*

#### BIOCHEMICAL, ENDOCRINOLOGIC AND METABOLIC ASPECTS

152. *The Psychological Response to ACTH, Cortisone, Hydrocortisone and Related Steroid Substances.* HOWARD P. ROME AND FRANCIS J. BRACELAND, Rochester, Minn. Am. J. Psychiat. 108:641-50, March 1952.

The article presents a study of several groups of patients receiving ACTH, cortisone, hydrocortisone and related steroids, also hormones, at the Mayo Clinic, for a variety of disorders, only a few of which included psychoses. It analyzes the psychic side effects of these medicaments and seeks to shed some light on the etiologic role of psychic factors in structural disease changes. The euphoria noticed in many of these patients could not, in the opinion of the writers, arise wholly from their relief from pain. Some patients had untoward effects such as depression, restlessness, overactivity, and even mild mania. Few of the group felt no psychic change, though less effect was observed when administration was oral, possibly because of quicker expulsion from the system.

For convenience, the patients were grouped according to their general reactions into four classes. Group I felt only euphoria and mental acceleration. In arthritics, mental improvement paralleled the physical. In conditions in which physical improvement could only be slow, the improvement in mental outlook outran the physical. The reaction seemed predicated by the degree of toxicity. Groups I and II comprised about 60 per cent of the total; Group II showed similar reactions but to a greater degree. They were stimulated physically as well as mentally. They were restless, insomniac, had increased strength and appetite, and acted as if under alcoholic influence in some cases. These were the reactions under dosage up to 100 mg. daily.

Group III, covering 25 to 30 per cent of the total, occasionally showed marked anxiety. These reacted mostly according to their individual ego; their reaction could best be understood if their earlier history had been known, especially regarding personality.

Group IV, the remaining 10 per cent, became grossly psychotic. Usually there was a history of a previous psychotic illness, different from the present condition. All symptoms subsided within a few weeks after treatment was stopped, but the disease for which treatment had been instituted promptly returned, particularly so in Addison's disease.

A condition involving physiologic deficiency of adrenocortical function is known to require smaller amounts of the drugs in question. It is also recognized that the

body better adapts itself to any change and develops "buffers" when the general health is good. Such changes are then not accompanied by demonstrable metabolic changes. It has also been shown that administration of potassium causes prompt disappearance of the changes cited in Groups III and IV.

Apparently the drugs under consideration tend to break down normal mental protective barriers, as changes in the patients' dreams and fantasies indicate. Sudden precipitation into what promises or threatens to be well-being, in an individual unprepared for such a change, can evoke anxiety, especially regarding interpersonal relationships in the disadvantageous position of the healthy. Another hazard found in a long course of these drugs is the possible appearance of Cushing's syndrome.

Withdrawal of the drugs brings an intense letdown, with the sudden return of the underlying symptoms and the former state of severe illness and disability.

Thus it appears that these drugs have wide direct and indirect effects. Still, they represent a large step forward since they can, apparently, modify ego defenses without affecting consciousness.

In discussion of this paper, Dr. Theodore Lidz stated that similar observations on a group of patients at Johns Hopkins Hospital had not given anything but the same results. He had noted little or no emotional reaction to the administration of these drugs, and he cited several specific examples. He felt that much further investigation and more carefully controlled studies were in order. 38 references.

153. *The Location of the Mental Functions of the Brain*. LELAND B. ALFORD, St. Louis, Mo. Postgrad. Med. 11:177-81, March 1952.

The writer's observations regarding the location of certain mental functions is at marked variance with the usually accepted theories. He suggests that difficulties of observation plus haphazard study has confused the picture for most workers. The condition with which he deals in this paper is the one variously called dementia, confusion, clouded awareness, etc. Experience has shown that even deeply confused patients, if examined in a friendly manner, can show ability to successfully carry out other complex mental feats.

To study these cases satisfactorily required that a complete picture, including autopsy, should be available.

During 1930 a number of cases were reported that indicated that confusion arises from lesions in the thalamus, rather than in the cortex as generally accepted. The illustrations and references demonstrate the contrast in effect on mental life and the production of confusion, between thalamic injuries and cortical lesions, even when these involve the most vital areas. The reasons for and complications of such symptoms as aphasia, in their relation to the previously held theories, result from misinterpretation.

One case is cited of a glioma in the supramarginal angular area, in which mild aphasia was the only overt symptom, in spite of the fact that no less than 23 syn-

dromes have been localized to this area. The author suggests that patients who show many of these signs are actually extremely suggestible and manufacture symptoms as wanted.

Another case, involving almost complete removal of both frontal lobes, was followed by little mental defect. Whence, then, all the symptoms usually following and attributed to this operation? The author believes the explanation may lie in physical, hidden and variable change in the tissues extending backward from the incision or injury to the centers in the thalamus; this also accounts for flat contradiction in findings as well as great variability.

Since dementia or confusion, whatever its degree or cause, means practical cessation of all mental activity above a very primitive level, and, since injuries elsewhere than in the thalamus do not interfere with the performance of even complex mental feats, it follows that mental activity is centered in the thalamus and, as the cases cited show, chiefly in the left thalamus. 14 references. 6 figures.

154. *Acute Delirious Mania*. HUGH F. JARVIE AND MARTIN C. HOOD, Oxford, England.  
Am. J. Psychiat. 108:758-63, April 1952.

For more than a century Bell's mania has been recognized as a definite entity, characterized by acute onset, extreme excitement, obscure causation and grave prognosis. Most victims die. If recovery does supervene, it is as sudden and rapid as the condition itself.

Larson found that 52 per cent of deaths in the course of manic depressive illness could be related to the onset of acute delirious mania, Bell's mania. He also found it in schizophrenics.

Pathologically, the most noteworthy feature is the presence of petechial hemorrhages of recent origin, perivascular in distribution, localized to, but widely scattered throughout the midbrain and hypothalamic region. Larson also relates the findings to such other conditions as heat stroke. He is careful to point out, however, that the initial factor in this mania is a mental one; the physiologic factors come later. The writers uphold Larson's theories that the cause of this condition may be found in the laboratory rather than in obscure relations to infective disease.

Larson's account leaves several problems unsolved. Why are the petechial hemorrhages concentrated in this area, leaving the cortex, for example, relatively untouched? Why do some patients recover spontaneously? Other workers fail to confirm Larson's finding of hypochloremia. Morgan believes the essential change is a hypothalamic dysfunction, but the authors think this too involved for full credence. In Byrne's case, a child after a head injury expressed the usual anticipatory anxiety before school examinations but the external expressions of his mood appeared to be exaggerated out of proportion to the depth of feeling with which they were associated.

On the basis of the observations of these workers, the authors propose their own conception of the nature of this disorder. They believe the condition is essentially an affective disorder, closer to the acute agitated depressive state than to the manic phase of manic depressive psychosis. Whether death is due to exhaustion of the hypo-

thalamic and midbrain centers or to a form of heat stroke dependent on dehydration and hypochloremia, they do not know; they incline to the former hypothesis. Only occasionally has the illness lasted more than a few days prior to hospitalization (e.g., been associated with other psychic illness or with emotional shock). A study of the effect in these cases shows that it is almost always described as depressive with great anxiety and perplexity; the delusional content is predominantly persecutory or self-accusatory. Catatonic excitement, arising in a schizophrenic, could lead to exhaustion, etc.; however, such episodes are usually short lived, showing none of the prodromal features of acute delirious mania.

With due temerity, the authors suggest electric convulsive therapy in the early stage before the patient becomes dangerously exhausted. Later, Larson's treatment by replacement of fluid and salt, is to be preferred. 15 references.

155. *Variability of Deterioration in Schizophrenia*. SOL LEVY AND R. H. SOUTHCOMBE, Medical Lake, Wash. Dis. Nerv. System 13:76-80, March 1952.

There has long existed a diversity of opinion regarding the various syndromes classified among the schizophrenias. It has long been recognized that adolescent or pubertal insanity has a more malignant tendency, at least clinically, than adult schizophrenia; and the prognosis as well as the response to even the newer types of treatment is known to be extremely poor. Some authors therefore claim that juvenile schizophrenia is an entirely different illness from the so-called adult schizophrenia and should be recognized as such.

It has been observed clinically that the juvenile type of schizophrenia has much in common with that type manifesting its first symptoms during the involutional period of life. Both types show a rather malignant course of illness and an extremely poor response to the newer therapies, whereas adult schizophrenia seems not to run such a rapid and malignant course and to respond much more favorably to treatment.

The study comprises 75 patients averaging 14 years of illness, divided into three subgroups of 25 each according to age at onset of the disease: juvenile, onset before 18; adult, onset between 18 and 45; and involutional, onset after 45. The various types of schizophrenia are represented as equally as possible among the groups. Since such factors as age, duration of illness, length of hospitalization, and amount and type of therapy were approximately equal, it was felt that one test would be sufficient to determine the degree of deterioration. The Wechsler-Bellevue Intelligence Scale, Record Form I, was administered in a controlled test situation. Since it is generally agreed that deterioration is relatively constant after 10 years' duration, and that some degree is to be expected with every psychosis, the question appears to be one of determining the degree rather than the existence of deterioration.

Results in loss of deterioration beyond the expected average for each group showed 53.3 per cent for the juvenile group, 23.3 per cent for the adult group and 42 per cent for the involutional group. Thus, the juvenile group showed, as an average, 130 per cent more deterioration than the adult group, and only 27 per cent more deterioration than the involutional group, while the involutional group showed as an average 80 per cent more deterioration than the adult group. These indications of

difference in degree of deterioration according to age of onset parallel responses to shock therapy as previously reported by the authors—best in the adult group and poorest in the juvenile group. The conclusion appears justified that schizophrenia occurring before age 18 and after 45 tends to run a rather malignant course with marked mental deterioration, and that beginning after adolescence and before the involutional period it tends to run a slower course with less deterioration.

The question arises whether or not juvenile and involutional types of schizophrenia represent different disease entities, as compared with adult schizophrenia, and have a different etiology. 9 references.—*Author's abstract.*

## GERIATRICS

156. *The Psychiatrist's Role in the Care of the Aging.* EDWARD B. ALLEN AND HOLLIS E. CLOW, White Plains, N. Y. *Geriatrics* 7:117-22, March-April 1952.

The psychiatrist should have a thorough medical training, and be a competent practitioner of medicine. He must also know the patient as a personality, as a social unit and how the total personality adjusts in interpersonal relationships. It is his duty to determine how much of any symptomatology presented is consistent for the patient's age or is pathologic. When psychotic manifestations appear, the psychiatrist is best qualified to determine to what degree they are functional or organic in character. The term "functional" refers to an alteration in the function of the central nervous system without any associated demonstrable evidence of chemical or structural pathology in this system. Under such conditions the question of competency may arise. The patient may be so depressed as to exaggerate his inadequacies; he may be so retarded he cannot react to the demands made of him; he may be so excited as to use poor judgment about serious matters; he may build up a regressed, child-like or suspicious reaction to reality. Such an individual, irrespective of age, is obviously incompetent. Organic incompetency is based on confusion rather than perplexity or the above noted reactions.

Psychotic organic reactions may be grouped as acute, subacute and chronic. The acute are generally the result of exogenous toxic or infectious factors and are generally characterized by a delirium with fluctuations of symptoms; the subacute are more prolonged; and the chronic are usually endogenous, the result of definite structural changes in the tissues of the central nervous system, and are usually characterized by a static, nonreversible psychotic picture.

Treatment consists of removing any toxic factors present by proper fluid and nutritional intake, adequate elimination and a careful balancing of exercise and rest sufficient for the patient's needs. Sometimes digitalis, demerol, aminophyllin, morphine or paraldehyde—usually the safest sedative, are definitely indicated, but they are generally used intermittently and discontinued as soon as possible, with proper clinical and laboratory controls. What is most important is proper nursing care, a lack of any perturbation on the part of the hospital personnel at any behavior disturbance of a patient, and a living into the life of the patient on the part of his physician. 7 references.—*Author's abstract.*

## ELECTROENCEPHALOGRAPHY

157. *Electroencephalographic Studies in Alcoholism.* SAMUEL C. LITTLE AND MERCER MC AVOY, Birmingham, Ala. Quart. J. Stud. on Alcohol 13:9-15, March 1952.

Previous investigators have shown that electroencephalographic abnormalities are noted in alcoholic patients during the stage of intoxication or in the presence of central nervous system disease resulting from alcoholism or its associated disturbances. Some observers have also noted that many chronic alcoholics have a "low voltage" type of electroencephalogram. In the present investigations, electroencephalograms were obtained on 34 confirmed alcoholics and on 55 normal controls. The alcoholics were not intoxicated at the time of the test and showed no evidence of any chronic nervous system damage associated with alcoholism, such as Korsakoff's psychosis, neuropathy, etc. It was found that there was little difference between the number of alcoholics and controls showing some alpha activity, but a striking difference was noted between the two groups when the "percent time alpha" and the degree of alpha modulation were compared. The average "percent time alpha" or alpha index was 72 per cent for the normal controls and 46 per cent for the alcoholics. Eighty-six per cent of the controls had good amplitude modulation as compared with 50 per cent of the alcoholics. The amplitude modulation was poor in 38 per cent of the alcoholics and in only 4 per cent of the controls.

It also seemed possible to differentiate between suppression of alpha activity due to anxiety and suppression due to alcoholism. The differentiation was made on the basis of the fact that patients with anxiety states show an improvement in alpha activity on hyperventilation while alcoholics do not.

The changes seen in addiction to alcohol differ from those previously found in other types of addiction and do not seem to be related to adrenal insufficiency. The present study did not throw light on the question of whether or not the poor alpha activity of alcoholics was a result of the cerebral condition predisposing to alcoholism or whether it was the result of the alcoholism itself. 21 references. 3 figures.—*Author's abstract.*

158. *The Effect of Rapid Intravenous Metrazol on the Electroencephalogram.* JACKSON SMITH, RICHARD ANDERSON, MARIE M. HEALEY, AND MILTON GREENBLATT, Boston, Mass. J. Nerv. & Ment. Dis. 115:443-46, May 1952.

Forty-eight hospitalized, nonepileptic neuropsychiatric patients were given intravenous metrazol. The injections were made rapidly with an initial dose of 1.5cc of a 10 per cent solution; the amount injected was increased by 0.5cc in subsequent tests until EEG or clinical change occurred.

All patients showed changes in the EEG; in one-third of the cases, the change was of the 3 per second slow wave and spike variety (petit mal). The response to metrazol was not significantly altered by electric shock treatment or prefrontal lobotomy.

It was concluded that petit mal bursts evoked by metrazol are not diagnostic of epilepsy. 5 references. 1 figure.—*Author's abstract.*